

REMARKS

The rejection of claims 5 to 22, 26 and 27 as being anticipated by WO 92/18690 (WO ‘690) is traversed, and has been overcome by amendment.

Independent claims 5, 10, 19 and require the walls of a superheater cavity to include water cooled tubes and/or to be cooled by cooling fluid in the wall, wherein the cooling fluid circulates through the water/steam circulation system for a recovery boiler. In particular, these claims require:

- a “cavity having cavity walls formed of water cooled tubes in fluid communication with the water cooled tubes in at least one of the walls of the boiler and the water or steam circulation system”, wherein the circulation system is for the boiler. (Claim 5 as amended).
- a “cavity separate from the furnace and having walls formed of water cooled tubes, wherein **fluid flowing through the water cooled tubes of the wall defining the furnace flows through the water cooled tubes of the cavity and to the at least one superheater.**” (Claim 10, emphasis supplied).
- “cooling a wall of the cavity by flowing the cooling fluid from the wall of the boiler through the wall of the cavity.” (Claim 19).

WO ‘690 does not disclose walls of a cavity that are cooled with the same water circulating through the walls of the boiler, as is required by the rejected claims. The reference in WO ‘690 (page 13, lns. 26-30) to “closely connected” pressure frames for

the “separate” superheating boiler and the waste liquor recovery boiler is not a teaching that the walls of both boilers are cooled with the same water circulation system. In particular, WO ‘690 does not state that the walls of the cavity are cooling tubes in fluid communication with water cooled walls of a boiler. Further, it is not inherent that the walls of the superheating boiler in WO ‘690 are water cooled with water from water cooled walls of the boiler. Assuming that the superheating boiler of WO ‘690 has water cooled walls, there is no reason to believe that the cooling water for the walls of the superheater is hot water flowing from the water cooled walls of the boiler.

The superheating surfaces 72 in WO ‘690 are not cooling tubes forming the walls of the superheating boiler. The disclosure in WO ‘690 (page 16, lns. 6-14) of superheating surfaces 72 states that such surfaces are “disposed in the superheating boiler” and does not state that the surfaces constitutes the walls of the boiler. The superheating surfaces 72 may be disposed within the superheating boiler and not form the walls of the boiler. By way of example, the present application discloses a superheater 24 (IV) that is distinct from the water cooled walls of the superheating cavity. Accordingly, the disclosure of a superheating boiler in WO ‘690 is not a suggestion that the walls of the superheating boiler are water cooled with water flowing from water cooled walls of the boiler. Absent an express disclosure in WO ‘690 that the walls of the superheating boiler are water cooled tubes through which flows water from the walls of the superheating boiler, there is no anticipation of the independent claims 5, 10 and 19.

There is also no anticipation of the dependent claims for at least the following reasons:

- WO '690 does not expressly or inherently forming the walls of a cavity from water cooled tubes of the walls of the boiler, as called for in amended claim 6 and claim 13.
- WO '690 does not expressly or inherently a plurality of superheaters as called for in claim 12.
- WO '690 does not expressly or inherently forming the superheater from water cooled tubes of the walls of the boiler, as called for in amended claim 5 and claim 13.

The rejection of claims 5 to 7, 9 to 15 and 18 to 22 as being anticipated by Hamm (US Patent 2,606,103) is traversed.

Hamm does not disclose a superheating cavity having walls formed of water cooled tubes and does not disclose that water from a boiler feeds such non-existent water cooled tubes. In Hamm, the walls of the second furnace D are made of a refractory material ("refractory walls 12) and cooled by air. Hamm, col. 5, ln. 60 to col. 6, ln. 3. Contrary to the Rejection, tubes 16, 17, 27 and 10 in Hamm are not water cooled walls. Rather tubes 16, 17, 27 and 10 form the super heaters in the second furnace D and recovery furnace. Hamm, col. 5, lns. 40-45. There is no anticipation because Hamm does not disclose:

- a “cavity having cavity walls formed of water cooled tubes in fluid communication with the water cooled tubes in at least one of the walls of the boiler and the water or steam circulation system”, wherein the circulation system is for the boiler. (Claim 5 as amended).
- a “cavity separate from the furnace and having walls formed of water cooled tubes, wherein **fluid flowing through the water cooled tubes of the wall defining the furnace flows through the water cooled tubes of the cavity and to the at least one superheater.**” (Claim 10, emphasis supplied).
- “cooling a wall of the cavity by flowing the cooling fluid from the wall of the boiler through the wall of the cavity.” (Claim 19).
- forming a superheater from water cooled tubes of the walls of the boiler, as called for in amended claim 6 and claim 13.
- a plurality of superheaters as called for in claim 12.
- forming a superheater from water cooled tubes of the walls of the boiler, as called for in amended claim 5 and claim 13.

The rejection of dependent claims 23 to 25 for obviousness over WO ‘690 is traversed for the reasons stated above with respect to independent claim 19.

The rejection of claims 23 to 25 for obviousness over Hamm is traversed for the reasons stated above with respect to independent claim 19.

The rejection of claims 17, 26 and 27 for obviousness over Hamm in view of WO '690 is traversed for the reasons stated above for independent claims 10 and 19.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

Claim 27 has been amended to exclude from the examples of biomass gasses natural and LPG gases which are not biomass gases.

Consideration of the information disclosure statement (IDS) submitted on January 30, 2007, is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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